

ABSTRACT OF THE DISCLOSURE

Methods and compositions for introducing a nucleic acid into the genome of at least one cell of a multicellular organism are provided. In the subject methods, a Sleeping Beauty transposon that includes the nucleic acid is administered to the multicellular organism along with a source of a Sleeping Beauty transposase activity. Administration of the transposon and transposase results in integration of the transposon, as well as the nucleic acid present therein, into the genome of at least one cell of the multicellular organism. The subject methods find use in a variety of different applications, including the in vivo transfer of genes for use in, among other applications, gene therapy applications.